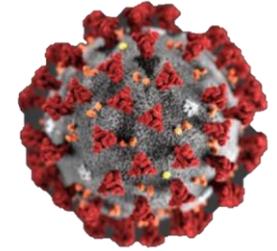


New Hampshire Coronavirus Disease 2019 Weekly Partner Call



September 23, 2021

*Ben Chan
Jonathan Ballard
Elizabeth Talbot
Beth Daly
Lindsay Pierce*

Thursday noon-time partner calls will focus on science, medical, and vaccine updates with time for Q&A

Healthcare Provider & Public Health Partner Calls

- **2nd and 4th Thursday** of each month from 12:00-1:00 pm (next call will be Thursday, October 14th)
- Webinar/call information:
 - Zoom link: <https://nh-dhhs.zoom.us/j/94059287404>
 - Webinar ID: 940 5928 7404
 - Passcode: 353809
 - Telephone: 646-558-8656

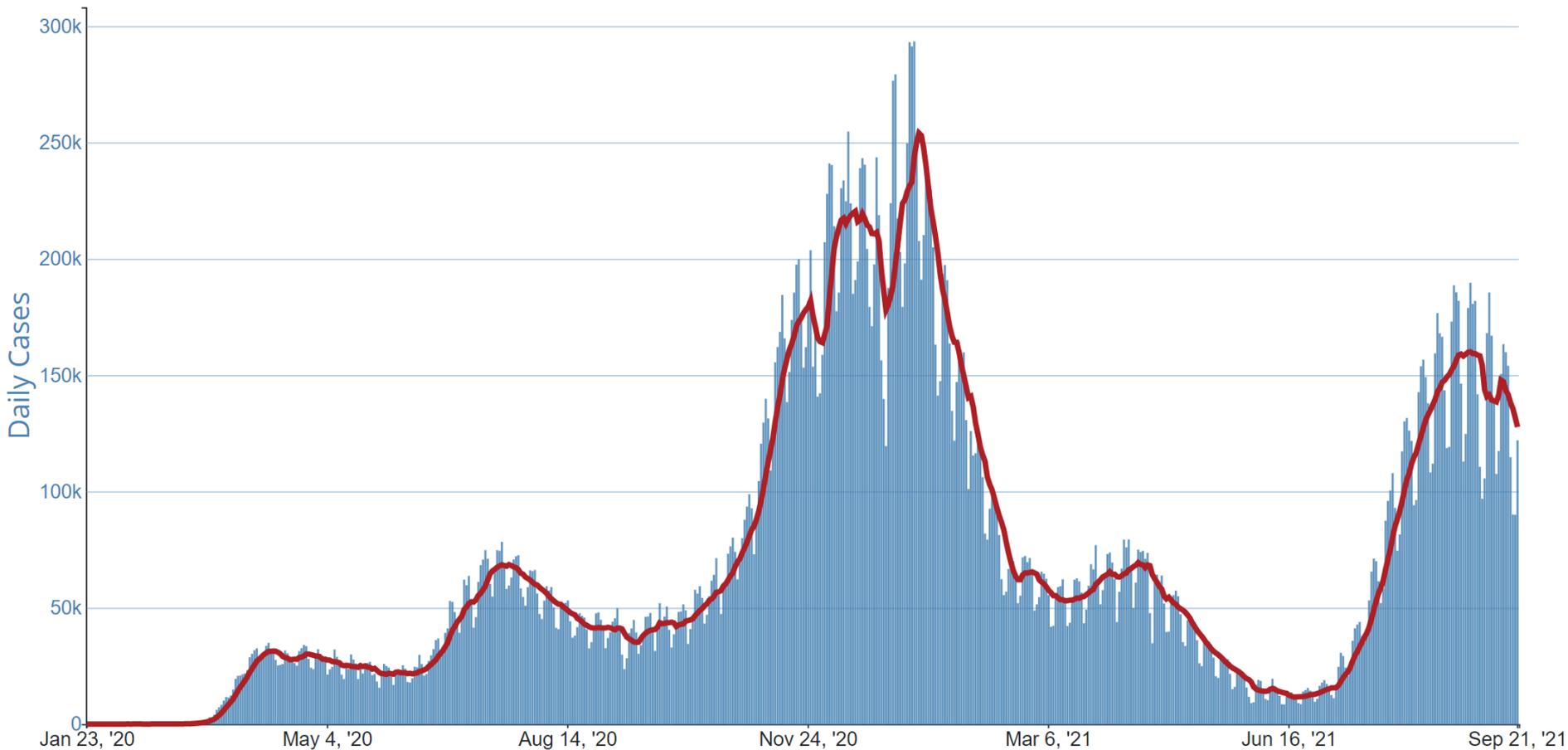
Agenda

- Epidemiology Update
- HAN Update #45: Monoclonal antibodies
- FDA & ACIP Updates: Vaccine Boosters
- Studies on Vaccine Effectiveness (VE)
- Other Public Health Updates
- Questions & Answers (Q&A)

Epidemiology Update

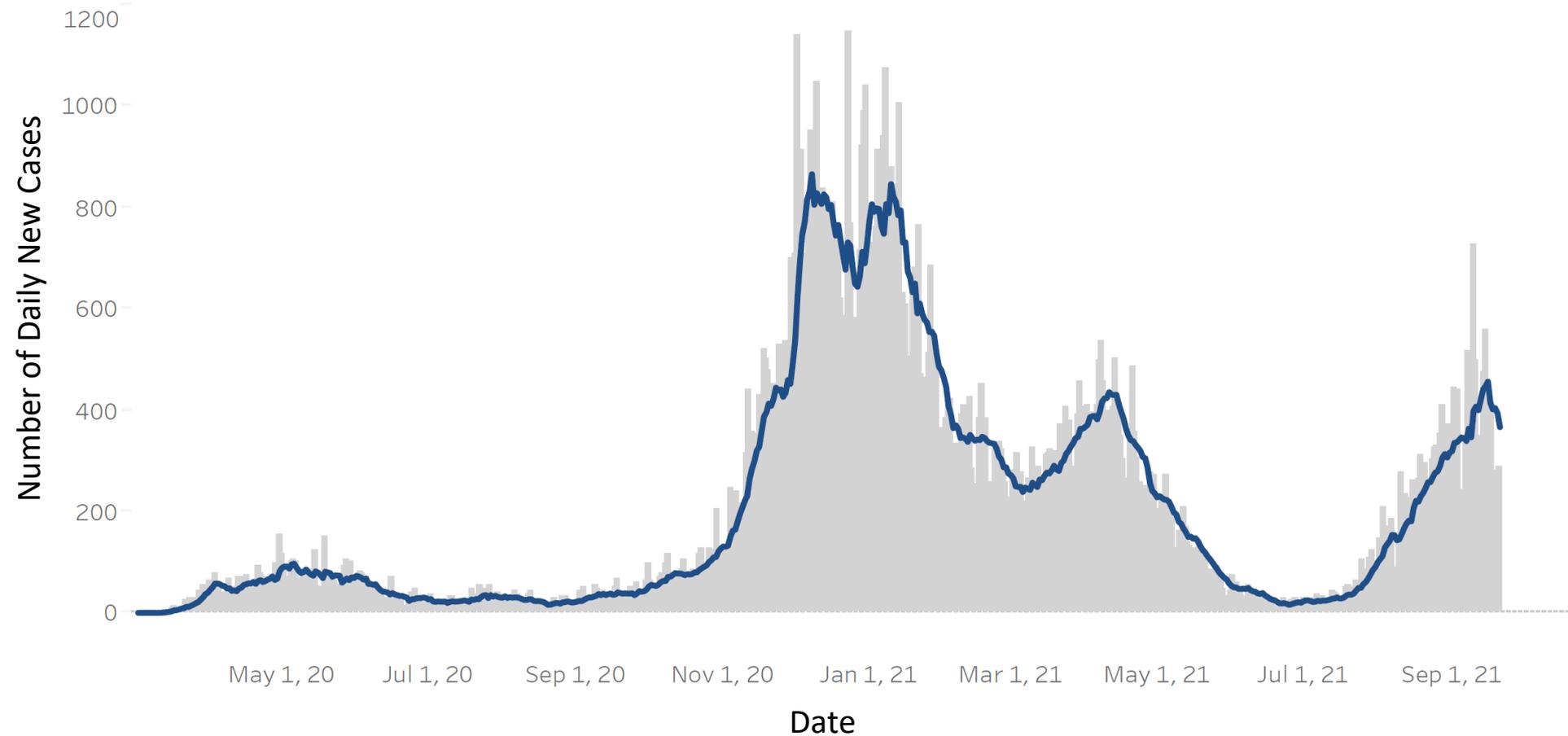
U.S. National Daily Incidence of COVID-19

Daily Trends in Number of COVID-19 Cases in The United States Reported to CDC



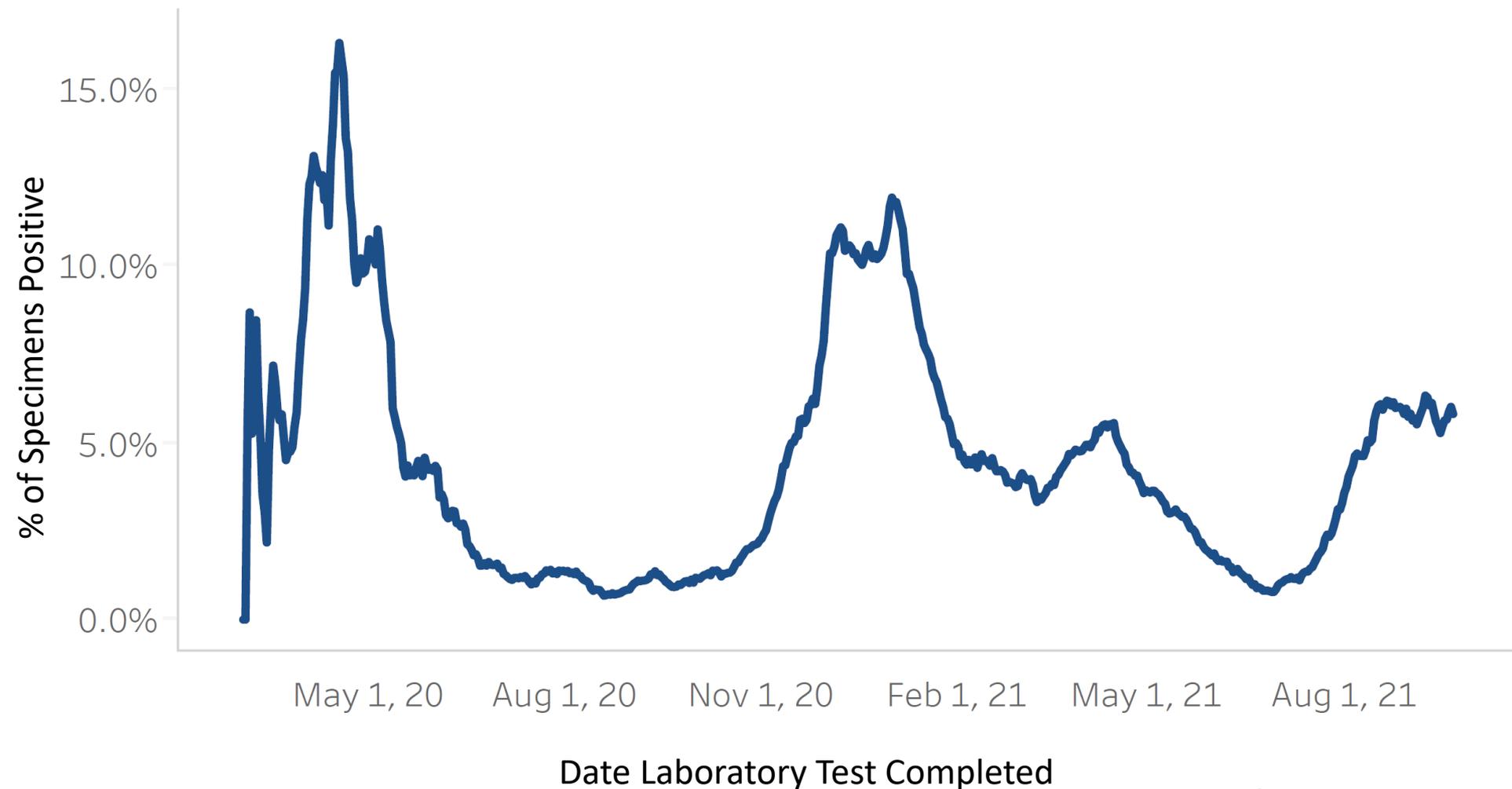
https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases

Number of New COVID-19 Cases per Day in NH



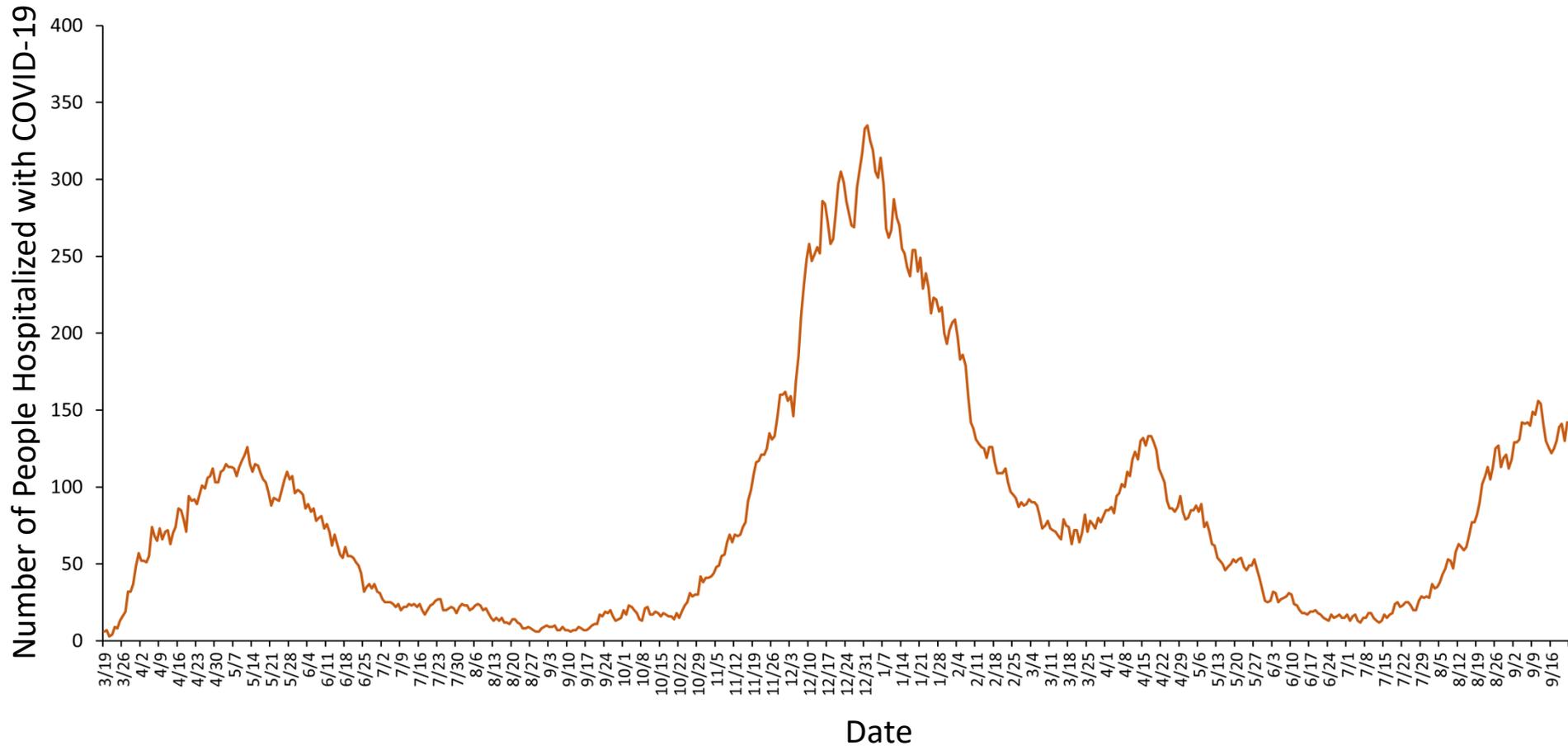
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

% of Tests (Antigen and PCR) Positive for COVID-19 (7-Day Average)



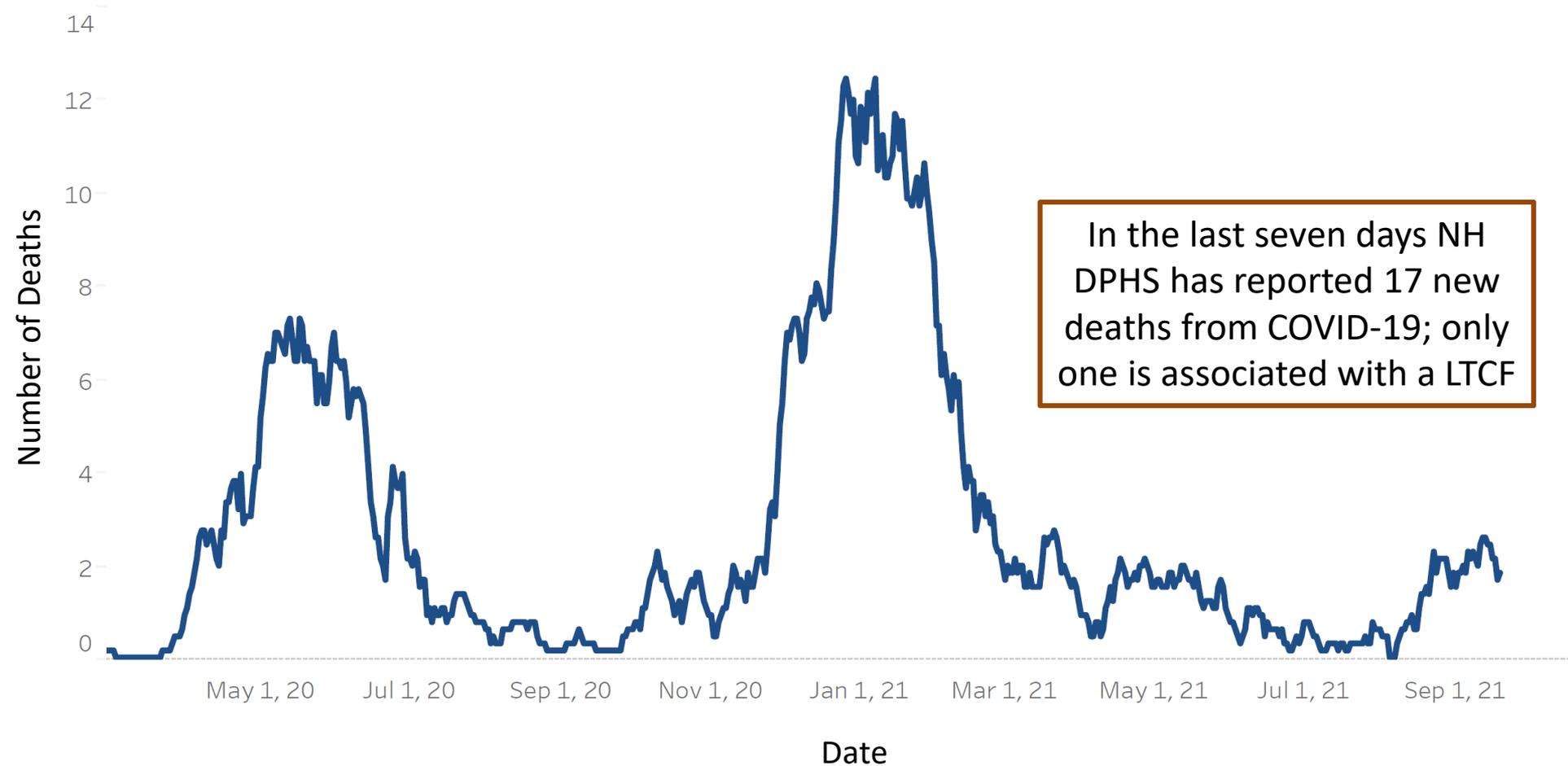
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

Number of People Hospitalized with COVID-19 Each Day in NH (Hospital Census)



<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

Average Number of COVID-19 Deaths per Day in NH (Based on Date of Death)



COVID-19 HAN Update # 45:

Anti-SARS-CoV-2 Monoclonal Antibodies

(Dr. Jonathan Ballard)



Monoclonal Antibodies for the Treatment of COVID-19

Jonathan Ballard MD, MPH, MPhil

Chief Medical Officer
Department of Health and Human Services
State of New Hampshire

*Healthcare and Public Health Partners Call
September 23rd, 2021*

Disclaimer

Please use original source recommendations/guidelines as well as individual health practitioner clinical assessment for patient care. This presentation is not meant to be all-encompassing and more recent clinical guidelines may exist at the time of your review of this presentation. References cited in this presentation were accessed on 9/15/2021.



Health Alert Network (HAN) from 9/17/2021

13

THIS IS AN OFFICIAL NH DHHS HEALTH ALERT

Distributed by the NH Health Alert Network
DHHS.Health.Alert@dhhs.nh.gov
September 17 Time 1600 (4:00 PM EDT)
NH-HAN 20210917



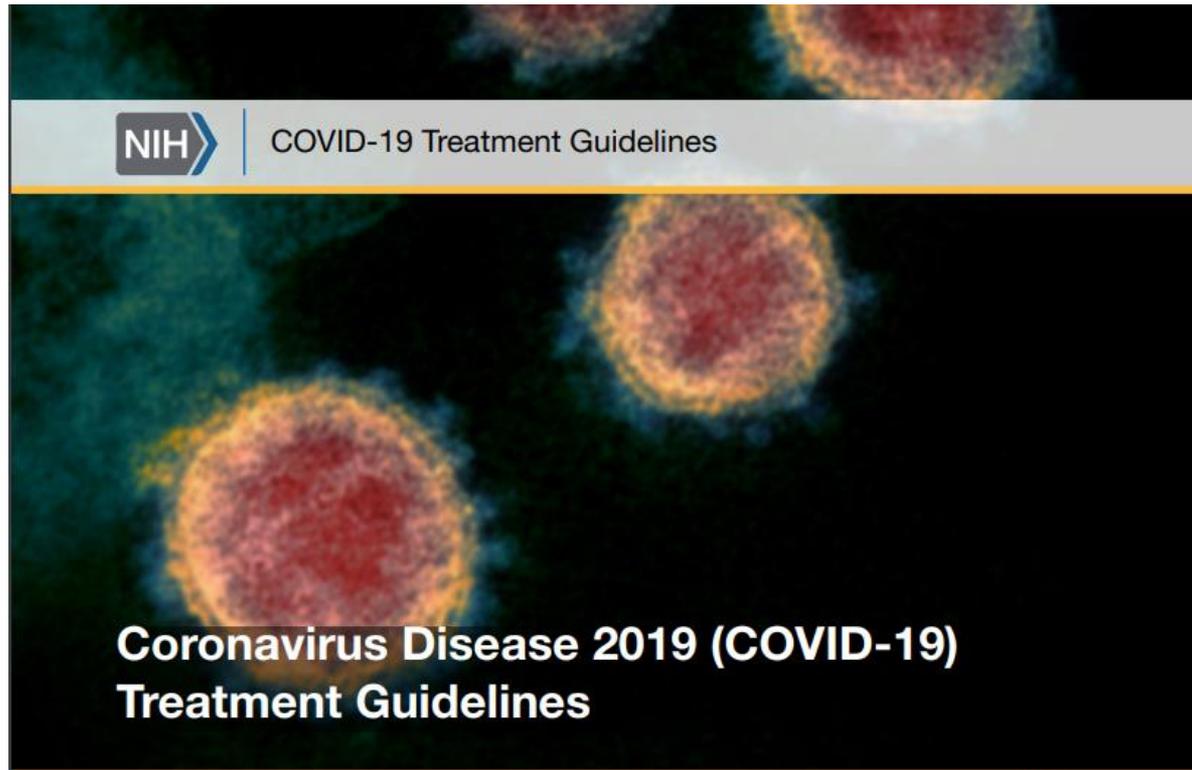
COVID-19 Pandemic, Update # 45 ***SARS-CoV-2 Monoclonal Antibody Therapy Updates*** ***Resumption of Healthcare Provider & Public Health Partner Webinars***

Key Points and Recommendations:

- Management of patients with COVID-19 vary by setting and severity of illness; providers should familiarize themselves with COVID-19 treatment guidelines from both the [National Institutes of Health](#) (NIH) and the [Infectious Disease Society of America](#) (IDSA)
 - Note the NIH has updated their guidance on [use of bamlanivimab plus etesevimab](#) but this not yet been incorporated into their guidance summary
 - Review the recent [CDC HAN](#) advising against the use of ivermectin, which has not been shown to be effective at treating or preventing COVID-19
- Three SARS-CoV-2 monoclonal antibody products are available for use under a U.S. Food and Drug Administration (FDA) Emergency Use Authorization (EUA), including [bamlanivimab plus etesevimab](#), [casirivimab plus imdevimab](#), and [sotrovimab](#)
 - Use these therapies for patients with mild to moderate confirmed COVID-19 infection and who are not hospitalized (unless hospitalized for a reason other than COVID-19) but are at high risk for progressing to severe disease and/or hospitalization



Treatment for COVID-19



Credit NIAID-RML

Downloaded from <https://www.covid19treatmentguidelines.nih.gov/> on 9/15/2021

Visit <https://www.covid19treatmentguidelines.nih.gov/> to access the most up-to-date guideline.



General Principles of Treatment for COVID-19

Treatments are based upon the general pathogenesis of COVID-19

- In the early clinical course, the disease is driven by replication of SARS-CoV-2 virus.
 - Therapies that directly target the virus may have greatest effect.
- Later in the clinical course, the disease is driven by dysregulation of the immune and inflammatory response to SARS-CoV-2 virus that leads to tissue damage.
 - Immunosuppressive/anti-inflammatory therapies may be more beneficial in later states of disease.

https://files.covid19treatmentguidelines.nih.gov/guidelines/section/section_121.pdf



Hospitalized Adult Treatment for COVID-19

NIH COVID-19 Treatment Guidelines

Search

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Management

Clinical Management

Clinical Management Summary

Nonhospitalized Patients: General Management

Nonhospitalized Adults: Therapeutic Management

Hospitalized Adults: Therapeutic Management

Critical Care

Guideline PDFs

[Section Only \(PDF | 5 MB\)](#)

[Full Guideline \(PDF | 5 MB\)](#)

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example@domain.com

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Therapeutic Management of Hospitalized Adults With COVID-19

Last Updated: August 25, 2021

Figure 2. Therapeutic Management of Hospitalized Adults With COVID-19 Based on Disease Severity

DISEASE SEVERITY	PANEL'S RECOMMENDATIONS
Hospitalized but Does Not Require Supplemental Oxygen	<p>The Panel recommends against the use of dexamethasone (AIIa) or other corticosteroids (AIII).^a</p> <p>There is insufficient evidence to recommend either for or against the routine use of remdesivir. For patients at high risk of disease progression, remdesivir may be appropriate.</p>
Hospitalized and Requires Supplemental Oxygen	<p>Use one of the following options:</p> <ul style="list-style-type: none">• Remdesivir^b (e.g., for patients who require minimal supplemental oxygen) (BIIa)• Dexamethasone plus remdesivir^b (e.g., for patients who require increasing amounts of supplemental oxygen) (BIII)• Dexamethasone (when combination with remdesivir cannot be used or is not available) (BI)
Hospitalized and Requires Oxygen Delivery Through a High-Flow Device or Noninvasive Ventilation	<p>Use one of the following options:</p> <ul style="list-style-type: none">• Dexamethasone (AI)• Dexamethasone plus remdesivir^b (BIII) <p>For recently hospitalized^c patients with rapidly increasing oxygen needs and systemic inflammation:</p> <ul style="list-style-type: none">• Add either baricitinib (BIIa) or IV tocilizumab (BIIa) to one of the two options above^d• If neither baricitinib nor IV tocilizumab is available or feasible to use, tocilizumab can be used instead of baricitinib (BIIa) or IV sarilumab can be used instead of IV tocilizumab (BIIa).
Hospitalized and Requires IMV or ECMO	<ul style="list-style-type: none">• Dexamethasone (AI) <p>For patients who are within 24 hours of admission to the ICU:</p> <ul style="list-style-type: none">• Dexamethasone plus IV tocilizumab (BIIa)• If IV tocilizumab is not available or not feasible to use, IV sarilumab can be used (BIIa).

<https://www.covid19treatmentguidelines.nih.gov/management/clinical-management/hospitalized-adults--therapeutic-management/>



Non-Hospitalized Adult Treatment for COVID-19

Figure 1. Therapeutic Management of NonHospitalized Adults with COVID-19

All outpatients with COVID-19 who enter the health care system should have in-person or telehealth follow-up visits. Symptomatic treatments, including hydration, antipyretics, analgesics, and antitussives, can be initiated as needed.

Patients should be counseled about symptoms that warrant re-evaluation by a health care provider (e.g., new onset dyspnea, worsening dyspnea [particularly dyspnea that occurs while the patient is resting or that interferes with daily activities], mental status changes). Home resources should be assessed before patients are discharged from a clinic, urgent care center, ED, or hospital; outpatients should have access to housing, proper nutrition, a caregiver, and a device that is suitable for telehealth. If patients are discharged while they are still receiving oxygen supplementation, they should receive oximetry monitoring and close follow-up soon after discharge.

PATIENT DISPOSITION	PANEL'S RECOMMENDATIONS
<p>Not Requiring Hospitalization or Supplemental Oxygen, As Determined by a Health Care Provider in ED or an In-Person or Telehealth Visit</p>	<p>Anti-SARS-CoV-2 monoclonal antibody products are recommended for outpatients with mild to moderate COVID-19 who are at high risk of disease progression, as defined by the EUA criteria (treatments are listed in alphabetical order):^a</p> <ul style="list-style-type: none"> • Casirivimab plus imdevimab; or • Sotrovimab <p>At this time, the Panel recommends against the use of bamlanivimab plus etesevimab in these patients due to an increase in the proportion of potentially resistant variants (AIII).^a See text for details.</p> <p>The Panel recommends against the use of dexamethasone or other systemic glucocorticoids in the absence of another indication (AIII).^b</p>
<p>Discharged From Hospital Inpatient Setting in Stable Condition and Does Not Require Supplemental Oxygen</p>	<p>The Panel recommends against continuing the use of remdesivir (AIIa), dexamethasone (AIIa), or baricitinib (AIIa) after hospital discharge.</p>
<p>Discharged From Hospital Inpatient Setting and Requires Supplemental Oxygen</p> <p><i>For those who are stable enough for discharge but who still require oxygen^a</i></p>	<p>There is insufficient evidence to recommend either for or against the continued use of remdesivir, dexamethasone, and/or baricitinib. Review the text below when considering the use of any of these agents after hospital discharge.</p>
<p>Discharged From ED Despite New or Increasing Need for Supplemental Oxygen</p> <p><i>When hospital resources are limited, inpatient admission is not possible, and close follow-up is ensured^d</i></p>	<p>The Panel recommends using dexamethasone 6 mg PO once daily for the duration of supplemental oxygen (dexamethasone use should not exceed 10 days) with careful monitoring for adverse events (BIII).</p> <p>There is insufficient evidence to recommend either for or against the use of remdesivir. When considering the use of remdesivir, review the text below for further discussion.</p> <p>The Panel recommends against the use of baricitinib in this setting, except in a clinical trial (AIII).</p>

Rating of Recommendations: A = Strong; B = Moderate; C = Optional
Rating of Evidence: I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion

<https://www.covid19treatmentguidelines.nih.gov/management/clinical-management/nonhospitalized-adults--therapeutic-management/>



What are Monoclonal Antibodies?

- They are similar to antibodies that your body makes to fight viruses, however are made in labs of pharmaceutical companies.
- Unlike polyclonal antibodies that target multiple antigens, monoclonal antibodies are copies of antibodies that target specific proteins.
- Monoclonal antibodies used to treat COVID-19 bind to the spike protein, and block the virus from entering the body's cells.
- When the virus cannot enter cells, they cannot make copies of themselves and limits the further spread of the virus within the body.
- If a person is already sick, it means monoclonal antibodies can help prevent severe symptoms that result in hospitalization and death.

<https://www.webmd.com/vaccines/covid-19-vaccine/news/20210826/monoclonal-antibodies-vs-vaccines-vs-covid-19>



FDA Emergency Use Authorization for Regen-COV (casirivimab and imdevimab)

19



September 9, 2021

Regeneron Pharmaceuticals, Inc.
Attention: Yunji Kim, PharmD
Director, Regulatory Affairs
777 Old Saw Mill River Road
Tarrytown, NY 10591

RE: Emergency Use Authorization 091

Dear Dr. Kim:

On February 4, 2020, pursuant to Section 564(b)(1)(C) of the Act, the Secretary of the Department of Health and Human Services (HHS) determined that there is a public health emergency that has a significant potential to affect national security or the health and security of United States citizens living abroad, and that involves the virus that causes coronavirus disease 2019 (COVID-19).¹ On the basis of such determination, the Secretary of HHS on March 27, 2020, declared that circumstances exist justifying the authorization of emergency use of drugs and biological products during the COVID-19 pandemic, pursuant to Section 564 of the Federal Food, Drug, and Cosmetic Act (the Act) (21 U.S.C. 360bbb-3), subject to terms of any authorization issued under that section.²

On November 21, 2020, the Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for emergency use of REGEN-COV (casirivimab and imdevimab, administered together)³ for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization. Casirivimab and imdevimab are recombinant human IgG1 monoclonal antibodies that target the receptor binding domain of the spike protein of SARS-CoV-2. They are investigational drugs and are not approved for any indication.

<https://www.fda.gov/media/145610/download>



- **Treatment** of Mild to Moderate COVID-19 in adults and children (12 years of age and older with weight of at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, who are at High Risk for progression to severe COVID-19, including hospitalization or death

OR

- **Post-Exposure Prophylaxis** of COVID-19 for individuals who are at risk for progression to severe COVID-19, including hospitalization or death.
 - Persons not fully vaccinated or who are not expected to mount an adequate immune response
 - Exposed to individual with COVID-19 consistent with CDC criteria for close contact or are at high risk of exposure to an individual infected with SARS-CoV-2 because of occurrence of SARS-CoV-2 infection in other individuals in the same **institutional setting**.

<https://www.fda.gov/media/145610/download>



- Method of administration may be through:

IV Administration

or

Subcutaneous Injection

<https://www.fda.gov/media/145610/download>



Criteria for Identifying High Risk Individuals

The following medical conditions or other factors may place adults and pediatric patients (age 12-17 years and weighing at least 40 kg) at higher risk for progression to severe COVID-19:

- Older age (for example, age ≥ 65 years of age)
- Obesity or being overweight (for example, BMI > 25 kg/m², or if age 12-17, have BMI ≥ 85 th percentile for their age and gender based on CDC growth charts, https://www.cdc.gov/growthcharts/clinical_charts.htm)
- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or immunosuppressive treatment
- Cardiovascular disease (including congenital heart disease) or hypertension
- Chronic lung diseases (for example, chronic obstructive pulmonary disease, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis and pulmonary hypertension)
- Sickle cell disease
- Neurodevelopmental disorders (for example, cerebral palsy) or other conditions that confer medical complexity (for example, genetic or metabolic syndromes and severe congenital anomalies)
- Having a medical-related technological dependence (for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19))

Other medical conditions or factors (for example, race or ethnicity) may also place individual patients at high risk for progression to severe COVID-19 and authorization of REGEN-COV under the EUA is not limited to the medical conditions or factors listed above. For additional information on medical conditions and factors associated with increased risk for progression to severe COVID, see the CDC website:

<https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Healthcare providers should consider the benefit-risk for an individual patient.

<https://www.fda.gov/media/145610/download>



Outpatient Locations for Monoclonal Antibodies

MONOCLONAL ANTIBODY INFUSION LOCATIONS for Persons Who Have Contracted COVID-19 and are At-Risk of Severe Outcomes

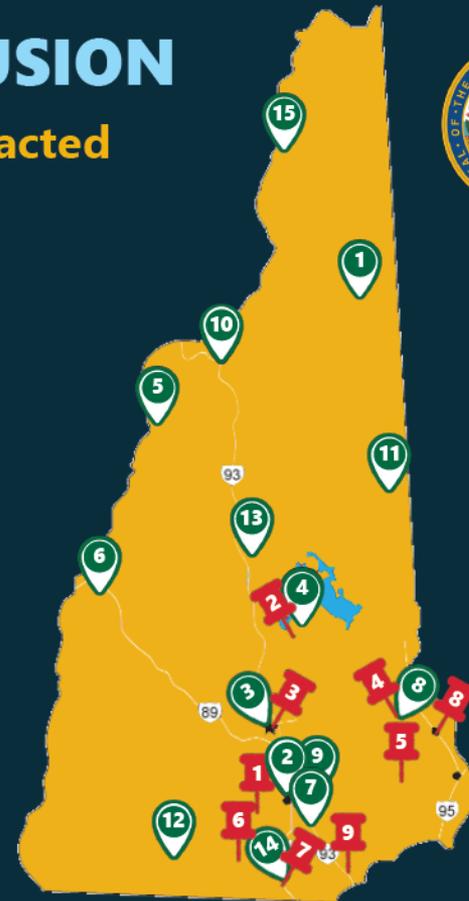


HOSPITAL LOCATIONS

- | | |
|--|--------------|
| 1 Androscoggin Valley Hospital | Berlin |
| 2 Catholic Medical Center | Manchester |
| 3 Concord Hospital | Concord |
| 4 Concord Hospital - Laconia | Laconia |
| 5 Cottage Hospital | Woodsville |
| 6 Dartmouth Hitchcock Medical Center | Lebanon |
| 7 Derry Medical Center | Derry |
| 8 Dover Freestanding ER
Operated by Portsmouth Hospital | Dover |
| 9 Elliot Hospital | Manchester |
| 10 Littleton Regional Hospital | Littleton |
| 11 Memorial Hospital | North Conway |
| 12 Monadnock Community Hospital | Peterborough |
| 13 Spears Memorial Hospital | Plymouth |
| 14 St. Joseph Hospital | Nashua |
| 15 Upper Connecticut Valley Hospital | Colebrook |

ConvenientMD LOCATIONS

- | |
|-------------------|
| 1 Bedford |
| 2 Belmont |
| 3 Concord |
| 4 Dover |
| 5 Exeter/Stratham |
| 6 Merrimack |
| 7 Nashua |
| 8 Portsmouth |
| 9 Windham/Salem |



<https://www.dhhs.nh.gov/dphs/cdcs/covid19/documents/monoclonal-antibody-map.pdf>



Pharmacies with mAB that service Skilled Nursing Facilities

24

Omnicare of New Hampshire

Health Direct

Northeast Pharmacy Services

Pharmerica



Ordering Monoclonal Antibodies

- United States DHHS has resumed weekly distribution amounts for states based on statewide incidence of new infections, hospitalizations, and product utilization
- NH DPHS allocates to NH facilities based on their requests and utilization, and the product directly ships from AmerisourceBergen
- To request supplies of monoclonal antibodies, email COVID19mAbDistribution@dhhs.nh.gov or call 603-271-4463



Thank you for all of your
work and service!



FDA & ACIP Updates: Vaccine Boosters

(Dr. Elizabeth Talbot)

Boosters

When: relative to an individual's completed series, after everyone else gets primary, and/or with global consideration?
Variant responsive?

Who: medically vulnerable to COVID or all? Regionally per variant?

With what: heterologous or homogenous or a new booster formulation?

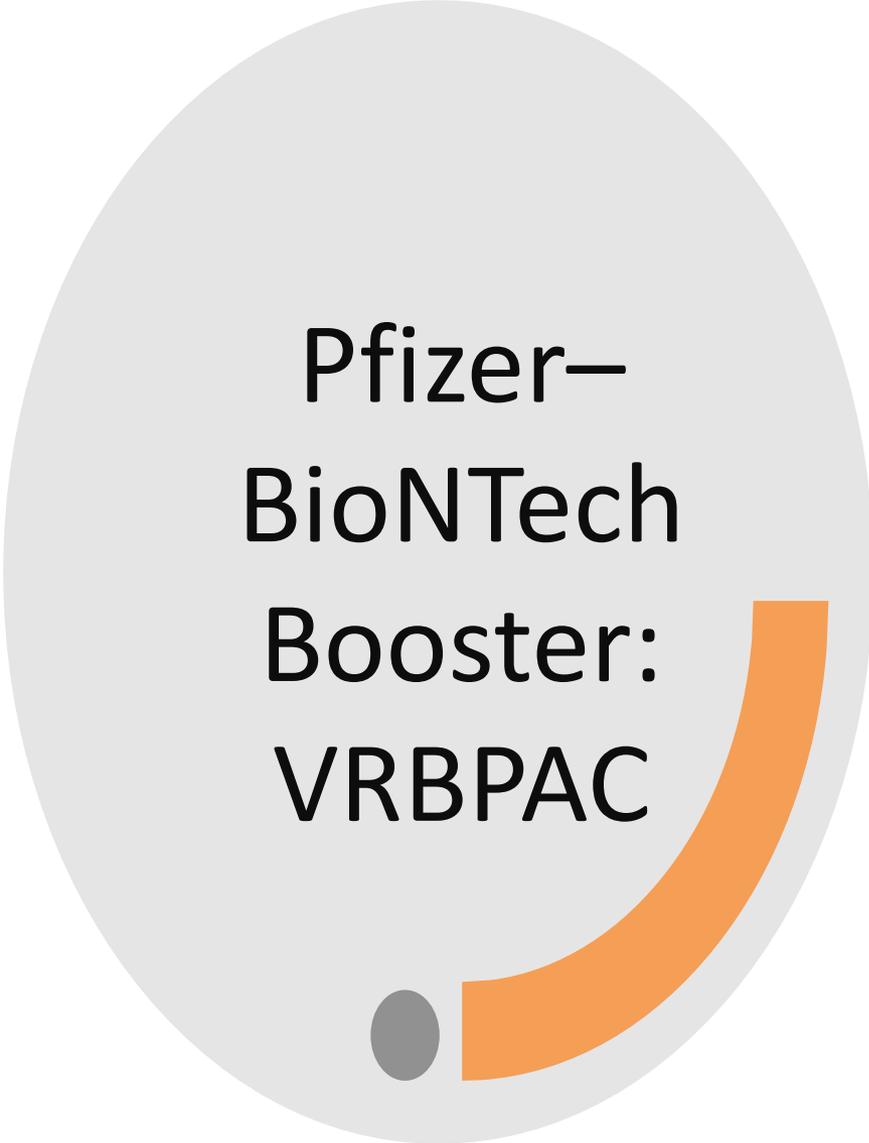
How? Only after safety, immunogenicity and public health need analyzed

Pfizer–BioNTech Current Regulatory Summary

- COMIRNATY® made by Pfizer for BioNTech
- Approved as 2-dose series for prevention of COVID-19 in individuals $\geq 16y$
- Authorized under EUA to be administered for emergency use to:
 - Prevent COVID-19 in individuals 12-15y, and
 - Provide 3rd dose to individuals $\geq 12y$ who have been determined to have certain kinds of immunocompromise

Sept 17: VRBPAC voted to recommend to FDA that a booster dose of Pfizer vaccine, given $\geq 6m$ after completion of primary series, may be used for persons

- ≥ 65 years;
- At high risk of severe COVID-19; and
- Frontline healthcare workers



Pfizer–
BioNTech
Booster:
VRBPAC

VRBPAC and Lancet Commentary: Pros

Discussions at VRBPAC meeting and a commentary summarized challenges to decisions around booster recommendations. Notably, some of the literature around VE and effectiveness are observational and not peer-reviewed, but:

- VE is greater against severe disease than against any infection
- Vaccination remains substantially protective against severe disease from all VOCs [VBMs]
- VE of most vaccines against symptomatic disease is less for delta than alpha
- VE against both symptomatic and severe disease due to delta remains high

After Delta became the most common variant,*
fully vaccinated people had reduced risk[†] of...

INFECTION

5X

HOSPITALIZATION

>10X

DEATH

>10X

**Vaccination offers strong
protection against COVID-19**



bit.ly/MMWR91021

* June 20-July 17, 2021
[†] Compared with people not fully vaccinated

MMWR

[CDC MMWR](https://www.cdc.gov/mmwr)

VRBPAC and
Lancet
Commentary:
Cons

Potential downsides to a booster dose:

- A premature third dose with an ancestral-strain vaccine may serve to over imprint the immune system and dampen responses to future delta-lineage boosters; waiting for a delta-specific vaccine is preferred
- If boosters that can have immune-mediated side effects (e.g., myocarditis after mRNA or GBS with Janssen/J&J) are widely introduced too soon or too frequently, vaccine acceptance may be adversely affected in the future
- A threshold for true waning in VE needs to be established, otherwise a poor precedent is set to boost q6m for mild waning
- Booster data from Israel provides info only on short-term advantage (7-12 days)



Pfizer – BioNTech Booster: FDA



Sept 22: FDA said it would amend the EUA for single booster dose, to be administered $\geq 6m$ after completion of primary series in:

- Individuals ≥ 65 years;
- Individuals 18 - 64 years of age at high risk of severe COVID-19; and
- Individuals 18 - 64 years of age whose frequent institutional or occupational exposure to SARS-CoV-2 puts them at high risk of serious complications of COVID-19 including severe COVID-19
 - Healthcare workers, teachers and day care staff, grocery workers, those in homeless shelters or prisons, among others

Booster Next Steps

Sept 22-23: ACIP voting on Pfizer booster recommendations

Data on the advisability of booster doses of the Moderna and Janssen/J&J vaccines are pending

Sept 20: Pfizer/BioNTech for 5-11yo

Phase 1/2/3 trial enrolling 4,500 6m-11yo without evidence of previous COVID in US, Finland, Poland, Spain in >90 sites

- 2,268 are 5-11yo

Phase 1 determined that 5-11yo receive 10ug/dose and <5yo 3ug/dose in 2-dose regimen 21d apart

1m following 2nd, NA geometric mean titer (GMT) was 1,197.6 (95% CI 1,106.1-1,296.6)

- Compares with GMT 16-25yo 1,146.5 (95% CI 1,045.5-1257.2)

Comparable safety profile c/w placebo recipients same age

Pfizer/BioNTech: Next Steps for Children

Submit to FDA,
EMA and peer-
reviewed
publication. Maybe
as early as end Oct!

Late September

Dec. 2021

For 6m - <5y,
expect data end
Dec 2021



14.8M Americans have received J&J

9/20 J&J Janssen Ensemble 1

- Among 30k participants ≥ 18 yo in multi-country study of one-dose,
 - Overall VE 66% (72% in US population)
 - 85% against severe disease
 - 100% against hospitalizations
 - 16 cases vs 64 in placebo arm

J&J Vaccine Effectiveness in US

- [Effectiveness study](#) preprint
- Health insurance record analysis through July (nb Delta variant emerged)
- Among 390,517 J&J vaccinees c/w 1.52M unvaccinated people matched on age, sex, time, ZIP code, risk factors, one-dose J&J vaccine
 - 79% protection against COVID-19 infection
 - Lower in high Delta incidence states
 - 81% protection against hospitalizations
 - 86% for participants < 60y
 - 78% for those \geq 60y

9/20 J&J Janssen Ensemble 2

- Among 30k participants in multi-country study, 2nd dose at 56d increased VE against mod/severe infection to 75%
 - 14 cases in vaccinees vs 52 placebo
- In US, VE 94% VE against mod/severe disease
 - 1 vaccinated vs 14 placebo resulting in wide confidence interval 58-100%
- 100% against severe disease

Is 56 Days Apart Right Interval?

- People given a booster shot $\geq 6m$ after their first dose had a 12-fold increase in antibodies
 - Compared to a four-fold increase for people who got a second dose at 2m, when measured at 4w after second dose
 - Protection should be stronger if people get boosters later
- Expected to extend duration of protection
- Submitted to FDA

Studies on Vaccine Effectiveness (VE)

(Dr. Benjamin Chan)

Monitoring Incidence of COVID-19 Cases, Hospitalizations, and Deaths, by Vaccination Status — 13 U.S. Jurisdictions, April 4–July 17, 2021

- Two surveillance measures to track vaccine effectiveness:
 - % of people with COVID-19 (% cases) who are fully vaccinated (% will naturally increase with increasing levels of population vaccination)
 - Incidence rate ratio (IRR) comparing rate of infection in unvaccinated vs. fully vaccinated persons
- Compared two time periods:
 - Pre-Delta: April 4th – June 19th
 - Delta Predominant: June 20th – July 17th

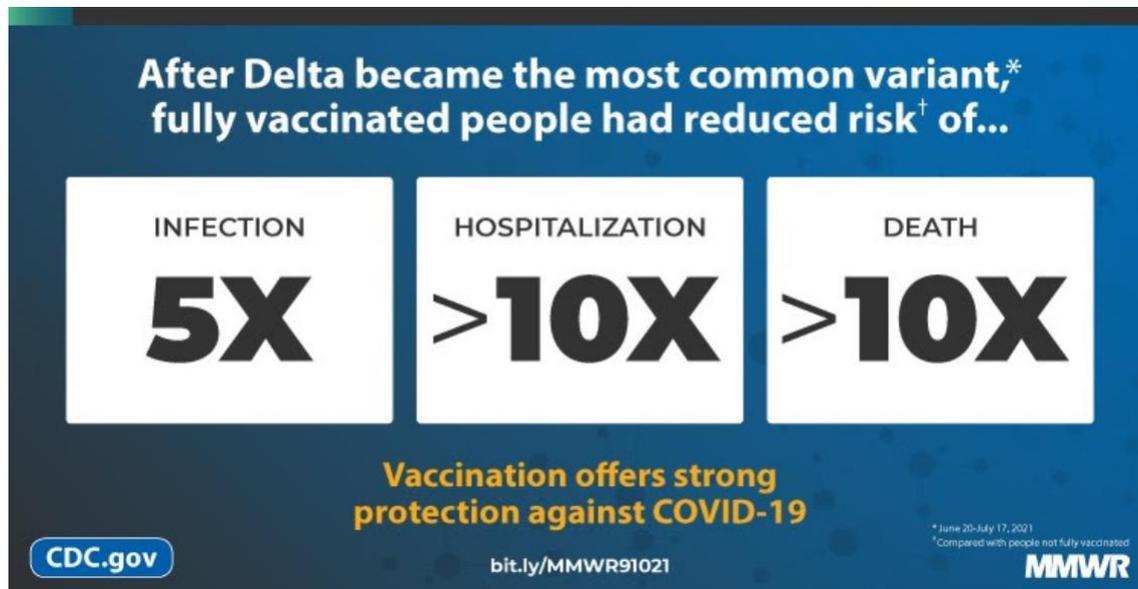
Comparing Infection, Hospitalization, and Death in Unvaccinated vs. Fully Vaccinated (IRR: Incidence Rate Ratio)

Time Period	IRR Comparing Unvaccinated to Fully Vaccinated Persons		
	Infection	Hospitalization	Death
Pre-Delta	11.1	13.3	16.6
Delta Predominant	4.6	10.4	11.3

- Pre-Delta people who were not fully vaccinated were at 11x higher risk of infection, 13x higher risk of hospitalization, and 16x higher risk of death compared to people fully vaccinated
- During Delta predominance, people who were not fully vaccinated were at 5x higher risk of infection, 10x higher risk of hospitalization, and 11x higher risk of death compared to people fully vaccinated

Comparing Infection, Hospitalization, and Death in Unvaccinated vs. Fully Vaccinated (IRR: Incidence Rate Ratio)

Time Period	IRR Comparing Unvaccinated to Fully Vaccinated Persons		
	Infection	Hospitalization	Death
Pre-Delta	11.1	13.3	16.6
Delta Predominant	4.6	10.4	11.3



<https://www.cdc.gov/mmwr/volumes/70/wr/mm7037e1.htm>

Changes in Vaccine Effectiveness (VE)

- Changes in IRR between time periods represented a change in VE from:
 - 91% to 78% (infection)
 - 92% to 90% (hospitalization)
 - 94% to 91% (death)
- People 65+ years of age had larger declines in VE against hospitalization and death compared to younger ages
- Other recent studies have also shown greater declines in VE against hospitalizations for older adults 75+ years of age ([Grannis et al. MMWR; Sept 10](#)), and veterans 65+ years of age ([Bajema et al. MMWR; Sept 10](#))

ORIGINAL ARTICLE

Protection of BNT162b2 Vaccine Booster against Covid-19 in Israel

- Israel approved “booster” doses of the Pfizer-BioNTech COVID-19 vaccine for persons 60 years of age and older (July 30, 2021)
 - Based on studies showing a booster dose increased antibody neutralization levels (compared to after 2nd dose)
- This study reports on vaccine effectiveness (VE) of a booster (3rd dose) of the vaccine at preventing confirmed infection and severe illness in persons 60+ years of age (compared to those who received only 2 vaccine doses)
 - Study period: July 30th – August 31st

Table 2. Primary Outcomes of Confirmed Infection and Severe Illness.*

Outcome	Nonbooster Group	Booster Group	Adjusted Rate Ratio (95% CI)†
Confirmed infection			11.3 (10.4 to 12.3)
No. of cases	4439	934	
No. of person-days at risk	5,193,825	10,603,410	
Severe illness			19.5 (12.9 to 29.5)
No. of cases	294	29	
No. of person-days at risk	4,574,439	6,265,361	

Other Public Health Updates

(Lindsay Pierce)

COVID-19 Case Reporting

New Hampshire is a dual reporting state:

- *NH RSA 141-C and He-P301 mandate reporting of suspect and confirmed cases by healthcare providers and laboratories*

Healthcare Providers:

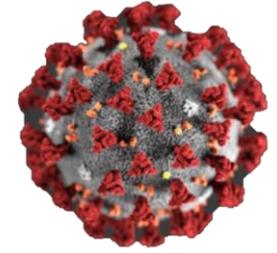
- Please submit complete [COVID-19 Case Report Form](#) by fax (603-271-0545)
- Report positive PCR/antigen tests, hospitalizations, and deaths
- Case report forms are not needed for negative or invalid tests

Questions & Answers (Q&A)

Healthcare Provider & Public Health Partner Calls

- **2nd and 4th Thursday** of each month from 12:00-1:00 pm (next call will be Thursday, October 14th)
- Webinar/call information:
 - Zoom link: <https://nh-dhhs.zoom.us/s/94059287404>
 - Webinar ID: 940 5928 7404
 - Passcode: 353809
 - Telephone: 646-558-8656

New Hampshire Coronavirus Disease 2019 Weekly Partner Call



September 23, 2021

*Ben Chan
Jonathan Ballard
Elizabeth Talbot
Beth Daly
Lindsay Pierce*

Thursday noon-time partner calls will focus on science, medical, and vaccine updates with time for Q&A